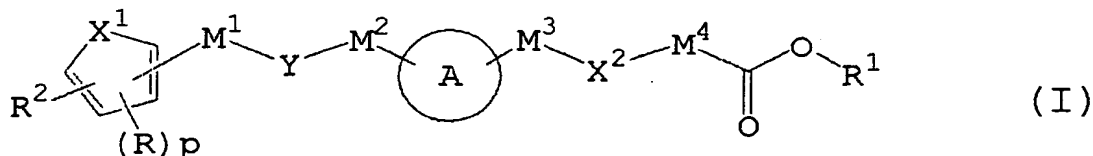


CLAIMS

1. A compound represented by the formula (I):



5 [wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, p is 0, 1 or 2, and when p is 2, each R may be the same or different, R¹ is a hydrogen atom or an optionally substituted hydrocarbon group, R² is an optionally substituted aromatic group, Ring A

10 is an optionally substituted monocyclic aromatic ring or optionally substituted bicyclic aromatic fused ring, X¹ is an oxygen atom or a sulfur atom, X² is a bond, an oxygen atom or -S(O)_n- (wherein n is 0, 1 or 2), Y is a bond, an oxygen atom, -S(O)_m-, -C(=O)-N(R³)- or -N(R³)-C(=O)- (R³ is a

15 hydrogen atom, an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, and m is 0, 1 or 2), M¹, M² and M³ may be the same or different and are each independently a bond or an optionally substituted

20 divalent aliphatic hydrocarbon group, and M⁴ is an optionally substituted divalent aliphatic hydrocarbon group (provided that (1) when Y is an oxygen atom or -S(O)_m-, M¹ is not a bond, (2) when Y is a bond and one of M¹ and M² is a bond, the other of M¹ and M² is neither a bond nor methylene,

and (3) it does not include 3-[3-[(2-methyl-5-phenyl-3-furanyl)carbonyl]amino]phenyl]-2-propenoic acid, 4-[(2-methyl-5-phenyl-3-furanyl)carbonyl]amino]benzeneacetic acid, 5-[[4-[(1Z)-2-carboxy-2-chloroethenyl]benzoyl]amino]-3-phenyl-2-thiophenecarboxylic acid, 3-[3-[(2-methyl-5-phenyl-3-furanyl)carbonyl]amino]phenyl]-2-propenoic acid and 4-[(2-methyl-5-phenyl-3-furanyl)carbonyl]amino]benzeneacetic acid) or a pharmacologically acceptable salt thereof.

10

2. The compound according to the claim 1, wherein R is an optionally substituted alkyl, an optionally substituted aralkyl, an optionally substituted cycloalkyl or an optionally substituted aryl.

15

3. The compound according to the claim 1, wherein p is 1.

4. The compound according to the claim 1, wherein R¹ is a hydrogen atom.

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5. The compound according to the claim 1, wherein R² is an optionally substituted phenyl.

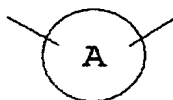
6. The compound according to the claim 1, wherein Ring A
25 is an optionally substituted monocyclic aromatic ring.

7. The compound according to the claim 6, wherein the monocyclic aromatic ring is a monocyclic aromatic heterocycle.

5

8. The compound according to the claim 6, wherein the monocyclic aromatic ring is a benzene ring or a thiazole ring.

10 9. The compound according to the claim 1, wherein the formula:



is the formula:



15 (wherein Ring A' is an optionally further substituted benzene ring).

10. The compound according to the claim 1, wherein X^1 is an oxygen atom.

20

11. The compound according to the claim 1, wherein X^2 is a bond, an oxygen atom or a sulfur atom.

12. The compound according to the claim 1, wherein Y is an oxygen atom or a sulfur atom.

13. The compound according to the claim 1, wherein Y is -
5 C(=O)-N(R³)- (R³ is a hydrogen atom, an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, and the carbon atom is bonded to M¹, and the nitrogen atom to M²).

10 14. The compound according to the claim 13, wherein R³ is a hydrogen atom, an optionally substituted alkyl, an optionally substituted aralkyl, an optionally substituted cycloalkyl or an optionally substituted aryl.

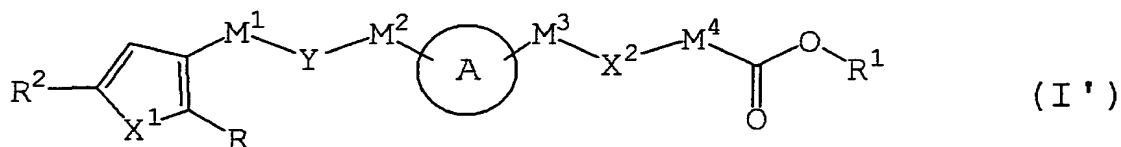
15 15. The compound according to the claim 1, wherein M¹ is an alkylene having 3 or more carbon atoms.

16. The compound according to the claim 1, wherein M¹, M² and M³ may be the same or different and are each
20 independently a bond, an alkylene, an alkenylene or an alkynylene, and M⁴ is an alkylene, an alkenylene or an alkynylene.

17. The compound according to the claim 1, wherein X² is
25 an oxygen atom or -S(O)_n- (wherein n is 0, 1 or 2) and M³ is

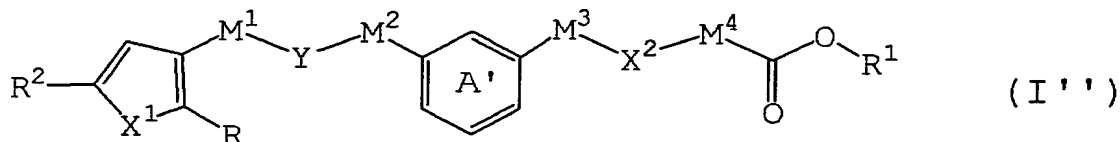
an optionally substituted divalent aliphatic hydrocarbon group.

18. The compound according to the claim 1, wherein the
5 formula (I) is



(wherein each of the symbols is as defined in the claim 1).

19. The compound according to the claim 18, wherein the
10 formula (I') is



(wherein the symbols are as defined in the claims 1 and 9).

20. The compound according to the claim 19, wherein X¹ is
15 an oxygen atom, X² is an oxygen atom or -S(O)_n- (wherein n is 0, 1 or 2), Y is an oxygen atom, M¹ is an optionally substituted C₁₋₃ alkylene, M² is a bond, M³ is a bond or an optionally substituted methylene, and M⁴ is an optionally substituted methylene.

20

21. The compound according to the claim 20, wherein M¹ and

M³ may be the same or different and are each independently an optionally substituted methylene.

22. The compound according to the claim 19, wherein X¹ is
5 an oxygen atom, X² is a bond, Y is an oxygen atom, M¹ is an optionally substituted n-propylene, M² and M³ are a bond, and M⁴ is an optionally substituted methylene.

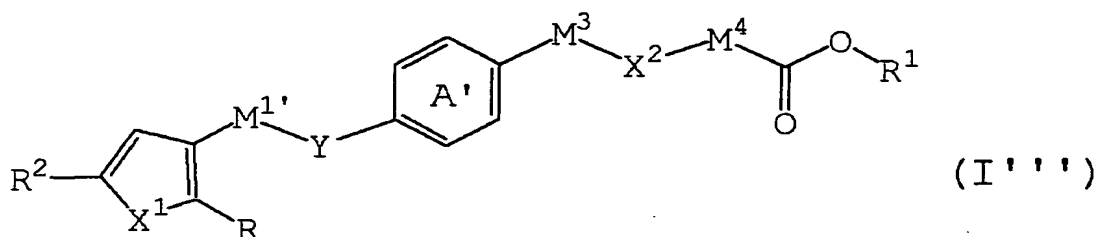
23. The compound according to the claim 18, wherein Ring A
10 is an optionally substituted monocyclic aromatic heterocycle.

24. The compound according to the claim 18, wherein Ring A is an optionally substituted thiazole ring or an optionally substituted oxazole ring, X¹ is an oxygen atom, X² is a bond,
15 Y is an oxygen atom or -S(O)_n- (wherein n is 0, 1 or 2), M¹ is an optionally substituted C₁₋₃ alkylene, M² and M³ are a bond, and M⁴ is an optionally substituted methylene.

25. The compound according to the claim 18, wherein Ring A
20 is an optionally substituted thiazole ring, X¹ is an oxygen atom, X² is a bond, Y is -S-, M¹ is an optionally substituted methylene or an optionally substituted n-propylene, M² and M³ are a bond, and M⁴ is an optionally substituted methylene.

25 26. The compound according to the claim 18, wherein the

formula (I') is



(wherein M^{1'} is an alkylene group having 3 or more carbon atoms, and the other symbols are as defined in the claims 1 and 9).

27. The compound according to the claim 1, wherein R is an optionally substituted alkyl, aryl or cycloalkyl group, p is 0 or 1, R¹ is a hydrogen atom, R² is an optionally substituted phenyl group, Ring A is an optionally substituted benzene ring or an optionally substituted thiazole ring, X¹ is an oxygen atom, X² is a bond or an oxygen atom, Y is an oxygen atom or -C(=O)-N(R³)- (wherein R³ is a hydrogen atom, alkyl or aralkyl, and the carbon atom is bonded to M¹, and the nitrogen atom to M²), M¹, M² and M³ may be the same or different and are each independently a bond or alkylene, and M⁴ is alkylene.

28. The compound according to the claim 1, wherein R is an optionally substituted alkyl, aryl or cycloalkyl group, p is 0 or 1, R¹ is a hydrogen atom, R² is an optionally substituted phenyl group, Ring A is an optionally

substituted benzene ring or an optionally substituted
thiazole ring, X^1 is an oxygen atom, X^2 is a bond or $-S(O)_n-$
(wherein n is 0, 1 or 2), Y is an oxygen atom or $-C(=O)-$
 $N(R^3)-$ (wherein R^3 is a hydrogen atom, alkyl or aralkyl, and
5 the carbon atom is bonded to M^1 , and the nitrogen atom to M^2),
 M^1 , M^2 and M^3 may be the same or different and are each
independently a bond or alkylene, and M^4 is alkylene.

10 29. A prodrug of the compound according to the claim 1.

30. A medicine comprising the compound according to the
claim 1 or a prodrug thereof.

15 31. An agent of regulating nuclear receptor PPAR
comprising the compound according to the claim 1 or a
prodrug thereof.

20 32. A prophylactic or therapeutic agent for nuclear
receptor PPAR-related diseases comprising the compound
according to the claim 1 or a prodrug thereof.

25 33. The prophylactic or therapeutic agent according to the
claim 32, wherein the nuclear receptor PPAR-related diseases
are lipid metabolism abnormality or sequelae thereof,
arteriosclerotic disease or sequelae thereof, diabetes

mellitus, or impaired glucose tolerance.

34. The medicine according to the claim 30, which is an agent of raising high-density lipoprotein cholesterol, an agent of lowering triglyceride, an agent of lowering low-density lipoprotein cholesterol or an agent of suppressing progress of arteriosclerotic plaque.

35. An agent of regulating GPR40 receptor function comprising the compound according to the claim 1 or a prodrug thereof.

36. The agent according to the claim 35, which is an agent of regulating insulin secretion, an agent of lowering blood glucose or an agent of protecting pancreatic β cell.

37. The agent according to the claim 35, which is a prophylactic or therapeutic agent for diabetes mellitus, glucose intolerance, ketosis, acidosis, diabetic neuropathy, diabetic nephropathy, diabetic retinopathy, hyperlipidemia, sexual dysfunction, cutaneous diseases, arthropathy, osteopenia, arteriosclerosis, thrombotic diseases, dyspepsia, memory and learning disorders, obesity, hypoglycaemia, hypertension, edema, insulin resistant syndrome, unstable diabetes mellitus, lipoatrophy, insulin allergy, insulinoma,

lipotoxicity or cancer.

38. A method of regulating nuclear receptor PPAR, which
comprises administering to a mammal an effective amount of
5 the compound according to the claim 1 or a prodrug thereof.

39. A method of preventing or treating nuclear receptor
PPAR-related disease, which comprises administering to a
mammal an effective amount of the compound according to the
10 claim 1 or a prodrug thereof.

40. The method according to the claim 39, wherein the
nuclear receptor PPAR-related diseases is lipid metabolism
abnormality or sequelae thereof, arteriosclerotic disease or
15 sequelae thereof, diabetes mellitus, or impaired glucose
tolerance.

41. A method of raising high-density lipoprotein
cholesterol, lowering triglyceride, lowering low-density
20 lipoprotein cholesterol or suppressing progress of
arteriosclerotic plaque, which comprises administering to a
mammal an effective amount of the compound according to the
claim 1 or a prodrug thereof.

25 42. A method of regulating GPR40 receptor function, which

comprises administering to a mammal an effective amount of the compound according to the claim 1 or a prodrug thereof.

43. A method of regulating insulin secretion, lowering
5 blood glucose or protecting pancreatic β cell, which comprises administering to a mammal an effective amount of the compound according to the claim 1 or a prodrug thereof.

44. A method of preventing or treating diabetes mellitus,
10 glucose intolerance, ketosis, acidosis, diabetic neuropathy, diabetic nephropathy, diabetic retinopathy, hyperlipidemia, sexual dysfunction, cutaneous diseases, arthropathy, osteopenia, arteriosclerosis, thrombotic diseases, dyspepsia, memory and learning disorders, obesity, hypoglycaemia,
15 hypertension, edema, insulin resistant syndrome, unstable diabetes mellitus, lipoatrophy, insulin allergy, insulinoma, lipotoxicity or cancer, which comprises administering to a mammal an effective amount of the compound according to the claim 1 or a prodrug thereof.

20

45. Use of the compound according to the claim 1 or a prodrug thereof for manufacturing an agent of regulating nuclear receptor PPAR.

25 46. Use of the compound according to the claim 1 or a

prodrug thereof for manufacturing a prophylactic or
therapeutic agent for nuclear receptor PPAR-related diseases.

47. Use of the compound according to the claim 1 or a
5 prodrug thereof for manufacturing a prophylactic or
therapeutic agent for lipid metabolism abnormality or
sequelae thereof, arteriosclerotic disease or sequelae
thereof, diabetes mellitus, or impaired glucose tolerance.

10 48. Use of the compound according to the claim 1 or a
prodrug thereof for manufacturing an agent of raising high-
density lipoprotein cholesterol, an agent of lowering
triglyceride, an agent of lowering a low-density lipoprotein
cholesterol or an agent of suppressing progress of
15 arteriosclerotic plaque.

49. Use of the compound according to the claim 1 or a
prodrug thereof for manufacturing an agent of regulating
GPR40 receptor function.

20

50. Use of the compound according to the claim 1 or a
prodrug thereof for manufacturing an agent of regulating
insulin secretion, an agent of lowering blood glucose or an
agent of protecting pancreatic β cell.

25

51. Use of the compound according to the claim 1 or a
prodrug thereof for manufacturing a prophylactic or
therapeutic agent for diabetes mellitus, glucose intolerance,
ketosis, acidosis, diabetic neuropathy, diabetic nephropathy,
5 diabetic retinopathy, hyperlipidemia, sexual dysfunction,
cutaneous diseases, arthropathy, osteopenia,
arteriosclerosis, thrombotic diseases, dyspepsia, memory and
learning disorders, obesity, hypoglycaemia, hypertension,
edema, insulin resistant syndrome, unstable diabetes
10 mellitus, lipoatrophy, insulin allergy, insulinoma,
lipotoxicity or cancer.